

Thinker

User's guide Release 2.2 Supplement

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Poor Person Software

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Summary of Release 2.2 vs 2.1 features

A major emphasis in the upgrade of **Thinker** from release 2.1 is the support of CD-ROM based files and improved display and print capabilities. This supplement has sections describing all of the new features in the section **New Behaviors**, and the changes in the **Menus**, **Requesters**, and **ARexx interface** in separate sections.

The CD-ROM changes introduce access to Read Only **Thinker** documents with the changes kept in a separate update file. This allows large **Thinker** documents (like the *Context Bible* by *Neuralink*) to be distributed on a CD-ROM but still allows the user to add commentary and hypertext links as if the document were on Read/Write disk.

The addition of External Links allows the construction of Hypertext documents based on large "flat" or non-hypertext databases. The **Thinker** document contains "External Links" which cause portions of the "flat" ASCII file to be displayed in the **Thinker** structure where the material can be manipulated. While the actual text cannot be modified, statements, labels and links can be added to personalize the document. A hypertext dictionary or encyclopedia can be constructed without duplicating the storage of the CD-ROM based database.

Any set of ASCII documents from C source files, Autodoc files, to collections of essays can be viewed as a single hypertext document by using External Links to display the ASCII material from within a **Thinker** document. Labels can be added to the external links so that words and phrases in the ASCII material can act as links within the collection of documents. See the new Jump command "Jump Link Select" to see how one specifies links in the extracted text.

Link handling can now be external to **Thinker**. This means that some process (initiated by an ARexx macro) can receive control as part of the Jump Link process and preprocess the link or even satisfy the link. This feature might be used to extend links over a network with the external link processor popping open a window to display the information retrieved from a remote process. Links can also contain macros that are expanded by **Thinker** to represent the current date. Such links can be used in daily planner applications.

The display has been improved so that each statement can be in a separate font.

Print formatting, while far from what is required for desk top publishing, has been improved with the addition of page numbering, footers, automatic index generation, and substitution of link names by level numbers (ie. 3.1.4). As long as printing is restricted to fixed spacing fonts internal to your printer, **Thinker** can now prepare full documents with centering, right margin adjustment, widow control, and indentation.

Improvements have been made in the user interface.

New scrolling gadgets now provide a full range of forward and backward scrolling.

Fast forms of commands eliminate many of the pop-up requesters for simple Branch operations.

Statements can be sorted by the changed date.

Numeric labels allow linking to "unlabeled" statements.

The Return key and Backspace key can have a more natural "word processing" behavior.

The ARexx interface is expanded to include more of **Thinker's** functions.

TinyDraw has some bugs fixed.

New Behaviors

Help Key support

Typing the Help Key causes **Thinker** to execute an ARexx macro defined in the Edit Fkeys requester. The Help key has an extra feature in that it is possible to return from Help processing by typing Shift-Help. Shift-Help takes you back to the File-Statement that was at the anchor of the window when you typed the Help Key regardless of what processing took place during the Help ARexx macro.

Initial Command when launched

When **Thinker** is first launched either from a Project Icon or the Workbench, an ARexx macro is automatically executed. When subsequent files are opened, no automatic macro is ever issued. The automatic ARexx macro applies only to the very first launch of **Thinker** and only if **Thinker** was launched naming an initial file

The Edit FKeys Requester is used to specify the "FirstCMD". Any ARexx macro may be specified here. The macro name is saved in the Icon with the Save Options menu selection.

Read Only Files

Thinker 2.2 has the ability to work with Read Only files such as files on a CD ROM drive. To accomplish this, **Thinker** can maintain all changes (text and structure) in a separate update file on a different disk. In this way the Read Only file can be edited just as any standard **Thinker** document. As long as the update file is present when **Thinker** is run the file will appear as edited. If the Update File facility is disabled or the update file is not available when **Thinker** is run, the file will be viewed in its unmodified form.

There are several aspects of Update files that will be clarified with some explanation.

Where is the update file written?

There is a tooltype in the icon called UPDDIR. This tooltype is

the name of the directory in which the update file is read or written. The Update Directory is **only** set by the initial launch of **Thinker**. Either the value is taken from the **Thinker** icon or the project icon but once **Thinker** is running the directory may not be changed. This may seem restrictive but believe me it is far too easy to completely trash one's work if this restriction is removed.

"UPDDIR=DH0:Thinker/Updates" would cause all update files to be written in DH0:Thinker/Updates. The name of the update file is the filename appended with ".upd". The file "Britanica-A-Z" would have an update file named "Britanica-A-Z.upd".

The only way to change or add the UPDDIR tooltype is to use the INFO program on the Workbench screen. Once added the UPDDIR value is carried through to any new files you create.

The default value for UPDDIR is "Thinker2:".

When are updates active?

When a file is opened (jumped to) and the "Use Update File" behavior is selected, the update file is processed. You can view a file with and without the updates depending on the setting of "Use Update File". If "Use Update File" is set when you do a SAVE, then either the current update file is added to or an update file is created.

Remember that the "Use Update File" behavior is only checked when a file is opened and when SAVE is selected. You may switch the behavior on and off between files so that some files are opened with updates and some without.

See the next sections to determine what happens with SAVE and SAVE AS depending on the setting of "Use Update File"

If you have an ICON for a file with an update file, and the ICON does not have UPDATE=YES (this can happen if you select Use Update File and then forget to SAVE OPTIONS) then the updates will not appear when the file is jumped to. Use CLOSE to close the file, select the Use Update File behavior, open the file. Remember to SAVE OPTIONS so that it won't happen again

(unless you want it that way).

Can one merge updates? With the file? With other updates?

Multiple update files cannot be merged. However updates can be merged into a **Thinker** document if the document is Read/Write. Why? Well you might make a set of updates against a file that you were not sure you wanted to make permanent. Once you decided to make them permanent, they can be merged into the base file.

SAVE AS always creates a new file **without** an update file with all updates merged in. It does this regardless of the setting of "Use Update File".

SAVE will merge updates into an existing file if SAVE is selected with "Use Update File" DESELECTED. Of course the file must be read/write. If "Use Update File" is SELECTED when SAVE is selected, the existing update file is updated or an update file is created for the updates.

Can I send an update file to a friend?

As long as the **exact same base file** is used (such as a CD-ROM file) an update file can be sent to another system and applied to the base file. However, you cannot merge your updates with your friend's. Sorry!

How does one set the options for a Read Only File

AmigaDos requires that the ICON for a file be in the same directory as the file. Of course if the file is on a CD-ROM then the ICON must be there too. This means that you cannot SAVE OPTIONS because the ICON is read only. Fear Not. A little trickery gets around this.

Create a small **Thinker** document in a read/write directory. Put a single statement in this file such as.

The real data for this file is in <CD-ROM:Britanica-A-Z,>

When you launch **Thinker** with this ICON simply double click on the link to jump to the real file.

To make it appear as if there were no extra file do the following. When you jump to the real file, open a "New Window". Resize the windows so that the window over the real file is the primary window. Select the Clip, and Spacing selections desired in the primary window. Make the original window active and select all the other desired options and behaviors (including Use Update File). Select SAVE OPTIONS with the original window active. Now when you launch **Thinker** using the small read/write file, you will be automatically put back into the Read Only file in the primary window with all the correct options. Remember to switch back to the original window any time you want to SAVE OPTIONS.

Style settings

The method of selecting the style of typed text has been changed. With the old method it was difficult to edit text in mixed styles as the style that would be typed tended to change during the editing process. With the new scheme it is harder to add a non-plain style of text at many different places in the text. The editing process seems more important.

In the new scheme the style of the text to be typed is set whenever the cursor is placed in the text using the left mouse button. The style of text to be typed is set to the character immediately to the left of the cursor when the left mouse button is clicked (if the cursor is at the first character of the statement then the style is that of the first character). The style of the text to be typed will not change during typing (especially if you backspace into a bold field while typing italic. The style will stay italic).

Do not bother to set the style of the text if the cursor is not displayed or is not in the correct place as the style will be reset when the cursor is moved using the mouse. The style menu is always updated to reflect the style that will be used for typed text.

Text style is a global variable that applies to all windows. If the cursor is visible in the text of several windows and you set the style in one

window, the same style will apply to the text typed in other windows that are subsequently activated. If you move the cursor in the newly activated window using the mouse, the style will be reset according to the placement of the cursor.

See-thru links

See-thru links may now have labels and may have text following the label specification. Only one level of See-thru link is evaluated so that a See-thru link that designates another See-thru link will not evaluate the second See-thru link.

"See Through links" can be to ARexx Ports. This means that when "Enable See Thru" is selected the displayed text is the result returned by the application processing the message. Do not try using the Thinker Arrex port in this fashion as it will time out.

External Links

Statements of the form [filename,offset,length] are known as external links. These links cause the display of text from the named file and can be used to treat non-Thinker files as hypertext documents. These links are expanded when the "Enable See-Thru" option is selected and appear with a "." in front of them when expanded. External links may have labels and the labels will appear to be attached to the extracted text. The extracted text may not be changed. There are two forms of external link.

(label)[filename,start-byte,length]

When "Enable See-Thru" is selected the data from the file "filename" starting at byte "start-byte" for a length of "length" is displayed on the screen.

(label)[filename,start-byte,length,search-string]

In this form the file is searched from "start-byte" until the string "search-string" is located in the file. The result is displayed for length "length"

Here is an example of an external link.

[thinker2:message.thnkr,8988,147]

It is possible to edit the External Link either with the "Enable See-Thru" option off or with it on. With "Enable See-Thru" off the link is edited just like any text on the screen. With "Enable See-Thru" on the Edit menu item "Edit XLink" is used. When this is selected an XLink Edit requester is brought up. This requester is explained at In the section **Edit XLink under Requesters**. After the link is edited using the "Edit XLink" requester the text of the External link is changed. If you disable the "Enable See-Thru" option after using "Edit XLink" you will see that new values have replaced the originals.

One use of External Links is in generating a Hypertext Dictionary or Hypertext Encyclopedia from a CD-ROM version. While it is best to write a program to scan the CD-ROM file and build a list of links, it may be done by hand.

Start with a new **Thinker** document and add a statement of the form (aardvark)[CD-ROM:dictionary,0,100,aardvark]. Now select "Enable See-Thru" and wait for the first appearance of the word "aardvark" to be located in the file. Use the Edit Xlink requester to scan the CD-ROM file until you find the definition of "aardvark" and extend the length to display the entire definition (you may have to use multiple statements).

Do the same thing for the statement of the form (mammal)[CD-ROM:dictionary,0,100,mammal]. Now when you double click on the word "mammal" in the definition of "aardvark" you will be able to jump to the definition of "mammal". When you have added a statement to the **Thinker** document for each word defined in the CD-ROM dictionary, you will have a hypertext dictionary.

A suggested form for the hypertext dictionary might be:

- (a) A words
(aardvark)
[CD-ROM:dictionary,nnn,yyy,aardvark]
(animal)
[CD-ROM:]
- (b) Bwords

... etc

This form makes it easier to include multiple statements under the definition of each word. Poor Person Software may distribute such a dictionary in the future at a very nominal cost.

Jump Return arrow changed

The Jump return scrolling arrow has been changed to a left pointing arrow to lessen confusion with backward scrolling.

The Return and Backspace keys have alternate behaviors

When the Behavior Menu option "Return equals Split" is selected the Return and Backspace keys have altered function. See "Return Equals Split" under the Behaviors menu.

Fast Version of Commands

Holding down either SHIFT key while selecting one of the command tools at the top of the screen puts the command into FAST mode.

Fast mode commands assume that "Branch" is selected and that "Mark" is selected. Thus a FAST copy is a copy of the marked branch. The cursor is changed into a pointing hand immediately so that you can point to the branch that you want to COPY, MOVE, or DELETE. A Fast JUMP is equivalent to QJMP and is added for consistency.

New Scrolling

There are now 7 scrolling gadgets as two new Backward scrolling gadgets have been added. Scrolling backwards is not as fast as scrolling forward. All the scrolling gadgets except the "Jump Return" gadget operation continuously as long as they are "held down".

The single arrows scroll by 1 line. The double arrows scroll by 1 statement. The triple arrows scroll by approximately 1 screen.

Scrolling backwards by a screen is an approximate procedure. In almost all cases the current anchor statement will be near the

bottom of the screen after the scroll operation. In rare cases the current anchor statement will be off the screen by 1 statement. The screen always moves by at least 1 statement.

The scroll forward screen operation now arranges for the last line displayed on the screen to become the first line of the next screen.

Import File requester changed.

The IMPORT file requester no longer starts scanning immediately. On floppy drive systems this often removes the requirement to put a floppy disk in the drive and then replace it with the one you wish to scan for the exported file.

Numeric labels

Each statement has a default label which is the block number in the file of the first portion of the statement. This block number is now displayed in front of the date when the "Show Date" option is selected.

A numeric label is specified as the string 0xxxB where xxx is the block number and the "0" and the "B" are required delimiters. A numeric label is valid anywhere that a label string is valid (such as in a link specification). The link <updates!,0379B> is a link to this statement.

When you select SAVE OPTIONS the numeric label of the statement at the anchor of the window is saved and the file will be repositioned at the correct statement when you restart **Thinker** by double clicking on the file icon.

BEWARE!!!! The block number of a statement does not change when you edit or move the statement. However, if you delete the statement then any link specification with a numeric label in it becomes invalid. If the same file block is subsequently used for another statement, the numeric label will designate the new statement. The file block could be used for some other purpose and leave the numeric label designating an invalid block. You should use numeric labels sparingly and only with files that rarely change!!!

An example use of numeric labels is in SEE-THRU LINKS. If you want to view an entire branch of one document in another document

you must either have labels on all statements in the branch or use numeric label values in the see-thru link specifications.

Dot Commands changed

Dot commands used to be available only as targets of Jump commands. They did not work in See-Thru links, Copy/Move targets, or any other place. This seemed silly. Dot commands may now modify any target.

There is a down side. Dot commands no longer have any effect if they modify a duplicate label. The F (Find) dot command has been removed.

Local clipping levels respected on PRINT and EXPORT

The expansion of statements with "+" clipping tools in front of them now impacts the appearance of printed and exported output. The new rule is that the printed or exported output will be exactly the same as appears on the screen.

In addition the size of the database to remember local clipping has been increased to 128 entries. It is now possible to expand a reasonable number of branches in a large document and then print or export the selected sections with a single operation.

Links to 8SVX sound files

Links may now be to 8SVX sound files. The sound will be played.

Link Macros

Certain character sequences in links are interpreted as macros. See the Enable Link Macros selection of the Options Menu.

ARexx preprocessing of links

This feature allows programs external to **Thinker** to preprocess links as part of the Jump Link process. See the section Use ARexx for Links under the Behavior Menu.

Statements longer than 2000 characters

For all *old* files and *newly created* files the TOOLTYPE MAXTEXT=*n* in the Thinker icon sets the maximum statement size. The MAXTEXT size can be edited using the "Edit MAXTEXT" menu option. See the Edit MAXTEXT selection of the Edit Menu. When a file is SAVEed the MAXTEXT size in effect becomes an attribute of the file and overrides any tooltype value.

What is the significance of MAXTEXT. When statements are displayed on the screen, each statement has MAXTEXT characters reserved for it. This makes it possible to edit the statement up to its maximum size. Setting MAXTEXT size small decreases the amount of memory Thinker uses but decreases the flexibility of editing. Likewise a large value of MAXTEXT allows for flexible editing but increases the use of memory.

Any statement in a file that is longer than the currently active MAXTEXT size will be displayed correctly and can be edited so long as its length does not exceed the original size when the statement was displayed. It is completely safe to set the value of MAXTEXT to a large number and edit a file entering large statements and later setting the value smaller. Only the ability to edit the large statements will change.

Thinker will display External Links larger than the current setting of MAXTEXT. Since the text displayed for an external link can not be edited no function is lost. The Largest size that the Edit EXLink requester will honor is the larger of the MAXTEXT size or the Length field of the External Link before it is expanded by Enable See Through.

Any MAXTEXT values outside of the range of 2000 - 65000 inclusive will be set to the proper endpoint value (2000 or 65000).

Beware: Setting this value large makes Thinker very memory intensive.

Fonts on a statement basis

The display font may now be selected on a window by window basis and fonts that override the window default may be selected for individual statements. See the section under the Font Menu and the section in ARExx Fonts.

Using Custom Screens

Thinker will open a custom screen based on the SCREEN tooltype in the **Thinker** icon. See the SCREEN section under New ToolTypes.

Improved print formatting

There is now a separate Print Options requester that sets some of the print options. The page length and margins are taken from the printer preference settings. If you want to change these, use the preference editor. All of the following discussion about page numbers, level numbers, and index generation applies to exporting if the prefix string is set to "!".

The Level Numbering Option controls whether or not the statement level numbers are printed at the left margin. These level numbers reflect the position of the statement in the document structure. If you want to include a title page in a document, it is best to put it as the last statement of a document rather than the first. In this way the first statement of the text is numbered "1" rather than "2" as it would be if the title page were statement 1. Level number printing can be suppressed for any single statement using the statement format editor. See the Edit Format selection under the Styles menu.

The Page Numbering Option controls whether or not page numbers are printed at the bottom of the page. Since preference printing does not allow printing within the bottom margin, two lines are lost when page numbering is selected. The page number can be suppressed on any page by using the statement format option that will suppress the page number for the page a statement is printed on. This is useful for title pages. See the Edit Format selection under the Styles menu.

When page number printing is selected, **Thinker** will format the statements added with the Build Index function in a special fashion.

Each statement in the Index branch is printed single spaced no matter what the spacing requested. The "<>" characters are removed and the statement is printed in lower case. Also the page that the labeled statement appears on will be printed after the label. Finally, if level numbers are being printed the statement level number will be added. Example, the following statement is generated by the Build Index function:

<EXPORTING> 321

If page numbering is selected during print as:

exporting 5

Where "5" is the page number. If level numbers are also being printed then the statement will be printed as:

exporting 5-2.3.3.4

Where "2.3.3.4" is the level number of the statement with the label "exporting". NOTE these numbers are made up for this example!

Finally, if level numbers are being printed, links in text of the form (<exporting>) are replaced by the form (<2.3.3.4>). The use of "<" and ">" to delimit the link (instead of the single "<" and ">" characters) are clues to the print processor that level number substitution is desired.

Export improvements

The Export requester has its own Level number and Page number option setting gadgets. These gadgets set the options for both Export and Print but each of the Print and Export requesters are now self contained. The line length and page length strings can be set to any reasonable numbers.

Export with the "!" prefix string activates all of the print formatting options.

Statement formats while printing

Print formatting options can be set for individual statements. These options alter the global printing options and allow for a minimal set of document formatting. See the Edit Format selection in the Styles menu for details about each option. See the Show Format selection under the Options menu for details about viewing some of the formatting on the screen prior to printing.

Menus

Project

Compact

Selecting Compact releases all free space in a file. This may result in a smaller file if there are a number of deleted statements.

Compact builds a new file and copies the old file to the new file using a Copy Plex operation. The old file is deleted and the new file is renamed. Statement dates are preserved. ARExx saved positions in the compacted file are lost.

Restrictions:

The new file is in the same directory as the old file. If the directory (or disk) is read only, Compact will fail without damage.

You cannot Compact a file with UPD active. A file to be compacted may have an update file which will be merged (as in Save As).

Notes:

All windows that display the file that is compacted will be re-positioned at the origin of the file (file positions get scrambled by the compaction).

Any link of the form 0nnnB will most likely be to the wrong block and may be invalid after the compaction.

You may run low on memory during the copy. If you select Abort you will be left with a partial new file with a name Tnnnnnnnnnn (nnnnnnnnnn is the decimal representation of time()).

If Compact fails for some other reason, the new file may be partial and the old file may be lost.

Edit

The Keyboard Shortcuts for Cut, Copy, and Paste have been changed. They are now consistent with accepted standards. The Keyboard Shortcut "Amiga P" now sets Number of Lines to 1.

Cut - Amiga X
Copy - Amiga C
Paste - Amiga V

Edit X-Link

This selection allows editing an external link definition while viewing the externally linked material. See the section "Edit Xlink" in the Requesters chapter.

Edit MAXTEXT

Selecting this option brings up a requester that allows you to change the maximum statement size (MAXTEXT) attribute of a file. This value can be 1000-65000 inclusive. Larger values increase the flexibility of editing large statements but increase the use of memory.

If OK is selected the file attribute is altered and will be written as part of the file on the next SAVE operation.

Commands

Insert

The new name "Insert Above" describes what in previous releases was called "Insert Up". That is, the new statement is Super-Ordinate to the statement with the cursor or pointed to. The Keyboard shortcut for "Insert Above" remains Right-Amiga-U.

"Insert Up" now means to insert After the statement Up from the one pointed to as it did in Release 1.

Jump

The **Jump Link Select** command allows a new way to delimit a link. The text selected by sweeping the mouse over text while holding down the left mouse button is used as the designator of the link. **Jump Link Select** is equivalent to typing the selected text into the **Jump Link - Link Address** requester, surrounding the selected text with "<>" characters, or changing the style of the selected text when using style delimited links.

This feature is designed for use with **External Links** which display text from ASCII files. Since such text is not alterable and may contain phrases that represent links, it is necessary to allow the phrase to be specified as a link. Select the text in the external link display and then use **Jump Link Select** to accomplish the jump.

Options

Number of lines

The Keyboard shortcut for **Number of Lines = 1** has changed from X to P.

Read Only Styles

Any of the non-plain text styles can be chosen to designate text that may not be modified. If **bold** is selected as a Read Only Style then no bold text in a document may be modified, cut, pasted over, or have its style changed. Read Only Styles may be selected in any combination.

You may type new text directly before or directly after Read Only text. Text typed directly after will take on the style of the Read Only text and thus become Read Only.

Hide ~

The "~" character used to show embedded carriage returns can be hidden from view with this selection.

Show Format

Selecting this Option causes **Thinker** to display statements in the format that they would appear in print. The visible formats are **CENTER**, **RIGHT** adjust, and **INDENT** characters. For statements with invisible formats such as **NOLEVELNUMBERS**, **NOPAGENUMBERS**, **FOOTERS**, **FORCE ODD**, **FORCE EVEN** and **NEED** lines, a "^" character is displayed at the far left.

Behaviors

Compress Statements

When this option is selected each statement is compressed when it is written onto the disk. A 15 to 20 saving in space is accomplished doing this. The compression is low because statements are not very long and the shorter the statement the less effective compression is. Compressed statements are automatically expanded when read. Previous versions of **Thinker** will do odd things with compressed statements, Beware!

Use Update File

When this behavior is selected, all changes go into an update file separate from the file being edited. See the section **Read Only Files** under **New Behaviors**.

Return equals Split

With this behavior enabled a typed Carriage Return causes the current statement to be split at the cursor. If the cursor is at the end of the statement the effect is the same as "Insert After".

In addition the behavior of the Backspace key is altered. A backspace typed with the cursor at the beginning of a statement will cause the statement with the cursor to be joined with the previous statement.

For **Join**, only one of the statements may have subordinate statements and neither statement may be an **IMAGE**. When statements are joined, the labels are amalgamated.

Holding down the shift key when typing the Return key and Backspace key reverses the Behavior setting. In this way the general behavior can be set as desired but individual Returns can be of the opposite behavior without having to select from the Options menu before and after typing the Return key.

Use ARExx for links

This behavior allows the user to provide custom link processing. When the "Use ARExx for Links" behavior is selected all links are passed to an ARExx macro for processing. The ARExx macro may pass the link back to **Thinker** by using the "Jump Label First <str>" ARExx command.

The TOOLTYPE (in either the **Thinker** icon or the Project icon) "LINKEXEC=execname.type" determines the name of the ARExx macro that will process the link. If no TOOLTYPE is present the default is "linkexec.thnkr". The "linkexec.thnkr" macro distributed with **Thinker** simply reflects the link back to **Thinker** via the "Jump Label First <str>" command. The link (typed in or marked on the screen) is passed the full link as its single parameter.

The TOOLTYPE must be added using the INFO command and will be remembered by **Thinker** with the Save Options menu.

Link Macros are not expanded before passing the link to ARExx so that the user's ARExx macro may do its own custom macro expansions. Link macros that are not modified by the ARExx macro will be processed by **Thinker** if the link is passed back using the "Jump Label First <str>" command.

Enable Link Macros

Certain character sequences in links are interpreted as macros. These sequences can be used to specify parts of the current date. A single link can thus refer to a label in a calendar branch with labels for different days and hours. The characters can be in upper or lower case (even mixed).

@MO - expands to the month as in Jan, Feb, etc.

@D - expands to a two digit day as in 09

@H - expands to a two digit hour of the day in 24 hour format.

Thus the link <@MO:@D> will represent the current date as in JUN:08 (the date this statement was added to the Updates! file). Note that the ":" is ignored but provides a convenient separator.

Beware about putting @ characters in labels. These characters become significant if Link Macros are enabled. This may make it seem that labels have disappeared.

Select Display Font

This menu item has been replaced by the Fonts menu. See the Fonts menu description.

Style

Edit Format

A new requester is brought up that allows you to select some print formatting for a statement or set the default for the window.

The Statement Format requester lets you select how the statement will be printed (or exported with the "!" prefix selection). Inserted statements have their format set to the same format as the immediately preceeding statement at the same level or if the new statement is subordinate to the insert point, the window default format is used.

The format features are:

Force Odd

Force the statement to print at the top of the next odd page.

Force Even

Force the statement to print at the top of the next even page.

Center

Forces the lines of the statement to be centered on the page. Each line is centered separately.

Right

Forces the lines of the statement to be printed against the right margin.

No Level

The statement will be printed without a level number even if level numbers are being printed.

No Page

The page upon which this statement is printed will not have a level number. This is good for title pages. Title pages are best put at the end of a document so as to not confuse the level numbers.

Need nnn

This statement will not begin on the current page unless "nnn" lines remain. This can be used to avoid widows.

Indent nnn

The statement will be printed with an indentation of "nnn" characters regardless of the structure level.

Footers

Left and right footers are set. When printing (or exporting with prefix "!") starts, footer strings are set to NULL. When a statement is encountered with a footer string which is NOT NULL this string becomes the new footer string (left or right) and will begin printing at the bottom of the page which contains the statement. If you want to replace a footer with blank (after having specified one) you must set

the footer string to at least 1 character of blank. A NULL footer string means that the statement will not alter the footers.

Left footers are at the left margin, right footers are right adjusted. Footer strings can be 61 characters in length but if they overlap or overlap with the page number in the center, the right footer wins.

Memory

This little used menu was replaced by the Fonts menu.

Fonts

Thinker now supports multiple fonts within a document.

The Previous use of Font selection for the entire display is backwards compatible. The Display font selection is honored as a default font. Any confusion that might exist can be eliminated by removing any "FONT=" tooltip in icons.

The Fonts menu is used to select the font of a statement or the font used to display an entire window. Multiple fonts do not apply to individual characters within a statement (this is a feature scheduled for a future release).

If the cursor is NOT within a statement visible on the screen, the font selection applies to the entire window. Font selections for windows are saved in the project icon as part of the Save Options selection. Clicking in the error message box is a good way to insure that the cursor is not within any statement visible on the screen when you wish to set the display font for a window.

If the cursor IS within a statement visible on the screen, the font selection applies to that statement only and becomes part of the attributes of the statement when the file is Saved.

There is an ARexx interface for font selection described in the ARexx section under FONTS.

Menu Items

Select

Brings up the Font selection requester (a file requester on the FONTS directory) for use in selecting a font. When OK is selected (or the entry is double clicked in Release 2.0) the chosen font is applied to either the statement or the window.

Default

Resets the font selection. When this is applied to a Window, the font used to display statements in the window is set to the Workbench font or the font selected by the FONT tooltype. When this is applied to a statement (the cursor is displayed within a statement visible on the screen) the statement's font is reset to float with the window.

Font.Size

Each time a font selection is made, the selected name (up to 32) is added to the Fonts menu so that it may be quickly selected in the future. This font list is saved in the icon with Save Options. These font names are saved with the "FONTS=" tooltype (not to be confused with the "FONT=" tooltype of the previous implementation).

The active font is shown in highlighted Text. The active font is either the font of the window (no highlight means the font floats with the Workbench), or the font of the statement in which the cursor is placed (no highlight means the font floats with the window).

Requesters

Export

Several fields has been added to the Export Requester.

Page Length

This sets the page length when exporting with a prefix string of "!". A form feed will be inserted in the exported document at the beginning of each page.

Line Length

This sets the length of the line for exporting with the "!" prefix string.

Page Numbers

If selected as YES, page numbers will be inserted in the bottom "margin" (last two lines of the page) of the page (when using the "!" prefix string).

Level Numbers

If selected as YES then level numbers (ie 1.1.2, 1.2.1, etc) will be added in front of each statement. This applies only when using the "!" prefix string.

Print

The Print selection now has its own Options Requester. The page length, line length and margins are from the Preferences setting and must be changed using the Preferences editor. The Page number and Level number options are the same as in Export.

Sort

A new sort type has been added. Selecting the "Dates" gadget in the sort setup requester sorts the selection by the date/time stamp (the last date/time when the statement was added or changed). Note that the "Dates" gadget is in the first column of the sort setup requester

Edit XLink

This new requester is added to edit external links while looking at the file from which the data is extracted. To use this requester you must place the cursor in an external link and have selected "Enable See-Thru" to expand the external link into the extracted text. Select "Edit XLink" from the Edit menu and the requester will pop up.

The requester displays the Offset and Length of the external link and the scroll bars may be used to modify these values. In addition there is a search string gadget which allows the user to enter a search string. When a search string is visible the "Next" gadget may be used repeatedly to find the next occurrence of the search string in the file. The Offset and Length values will be changed accordingly.

If you had selected text in the statement by sweeping the cursor over text with the left mouse button down when the Edit XLink requester is brought up, you can make the selected text the new link values by selecting the "Select" gadget in the requester. This gadget changes the link to match the selected text.

If you modify the Offset of an external link manually using the scroll bar, any search string associated with the link will be removed. You may add a search string or modify an existing search string at any time.

If you select OK then the external link definition is changed to match the current display. If you select CANCEL the definition reverts to the one at the time the "Edit XLink" requester was brought up.

File Requester

The scrolling gadgets now offer continuous scrolling.

The "Parent" gadget now goes all the way back to showing the mounted volumes. You no longer have to type the volume names into the string gadget.

On Workbench 2.0 systems double clicking the file names in the scrolling box will select the file.

ARexx

The ARexx port name can be set to some value other than "Thinker" in two ways. If Two copies of **Thinker** are started you will want to have different ARexx port names.

From the CLI the option -pPORTNAME sets the ARexx port name. Thus "Thinker -pTh2 filename" would set the ARexx port name to "Th2".

Add the TOOLTYPE "AREXXPORT=xxxxxx" to the **Thinker** tool icon. INFO on the workbench is used to edit the **Thinker** tool icon.

"Jump Label First <str>" commands now may name the same types of files/ports that the Jump Link command does. The ARexx commands will show pictures, launch applications, send ARexx messages (watch out for loops), issue CLI commands, and play sound files.

"See Through links" can be to ARexx Ports. This means that when "Enable See Thru" is selected the displayed text is the result returned by the application processing the message. Do not try using the **Thinker** ARexx port in this fashion as it will time out.

New commands have been added to improve the control of **Thinker** from ARexx programs.

ADD ABOVE "data"

Inserts a statement above the current one. That is the current statement and all subsequent statements at the same level become subordinate to the newly inserted statement. Equivalent to the sequence Insert Up, Move group (current to end of plex) after new statement at a level down. As in the Insert Above command.

CLEAR JUMPTARGET | DEFAULTFILE

Clears the Jump target window or Default file. Note: clearing the jump target window also clears the default file.

CLIPBOARD SHOW

Show the clipboard.

CLIPBOARD UNSHOW

Hide the clipboard.

COMPACT - Compact the current ARexx file.

GET ANCHOR

Returns the block number of the anchor statement in the active window.

GET BLOCKNUMBER

Returns the Block Number of the statement. This block number is used to form numeric labels in link specifications of the form <filename,0blocknumberB>. See the discussion of numeric labels under **New Behaviors**.

GET DATE

Returns the date associated with the current statement in the form "DDD MMM dd hh:mm:ss YYYY" which is the same format that is displayed on the screen with the Show Date option.

GET DEFAULTFILE

Returns the file name of the default link file.

GET FILENAME

Returns the filename of the active ARexx file. The active ARexx file is the last file to be referenced by an ARexx command. In cases where the ARexx command is the result of using an FKey, the ARexx file is the same as the file displayed in the window that was active when the Function Key was depressed.

GET FKEY n

Returns the Function key string for the Key with number 1 ... 10

GET FONT

Gets the font name and size for the current statement.

GET JUMPTARGET

Returns the windowid of the current jump target window

GET OFFSET

Returns the scrolling offset of the anchor statement in the active window. The scrolling offset is non-zero if the anchor statement is not entirely displayed on the screen either because it is too large or because you have scrolled forward by a few lines.

GET SEE-THRU

Returns a return code (rc) of 1 if "See-Thru" is enabled and returns a return code (rc) of 0 if "See-Thru" is disabled.

GET SELECTED

Returns any selected text and sets the default ARexx file and Arexx blk to the statement with the selected text.

GET STYLESTR BOLD|ITALIC|UNDERLINE

This command returns the escape sequence strings for the selected style as two blank separated strings.

BOLD | ITALIC | UNDERLINE - selects which set of strings is to be modified.

GET TITLE

Gets the title of the active window. The title is the name of the file displayed.

IMPORT AFTER|DOWN 1|2 filename

This command Imports the named file AFTER or DOWN from the current ARexx position. When the command is issued as a macro the current position is the statement with the cursor or the origin of the window. When the command is issues from outside **Thinker** the current ARexx position must be set by a GET or JUMP command. The effect of this command is the same as using the Import menu selection.

AFTER | DOWN - The imported file is either at the same level or subordinate to the current position.

1 | 2 - The number of line ends that determines the end of a statement. "2" means that a blank line separates statements.

"filename" is the name of the ASCII file to be imported.

See the section in ARexx under Set Style Strings for a description of how to set the style escape sequences.

LOCK - Lock **Thinker** to listen only to the returned port

If Addressed to the main ARexx port this command will return a new port name and lock out all activity directed to the main ARexx port. Activity is also locked out from the keyboard and mouse. Only ARexx commands directed at the new port will be honored.

MAXTEXT nnnn

Sets the MAXTEXT attribute of a file as described in the Edit MAXTEXT selection of the Edit Menu.

NOPICTURE - stop display of picture

SEE-THRU ENABLE|DISABLE

Enable or Disable See-thru links

SET DEFAULTFILE

Sets the default link file to the file displayed in the jump target window. As in the menu interface, the Jump Target window must be set first.

SET FKEY n 'string'

Sets the function key string of key "n" to the string 'string'. As in other REXX commands the "" marks are removed when the string is processed.

SET FONT Font.size

Sets the font name and size for the current statement.

SET JUMPTARGET id

Sets the window with ID=id to be the jump target window.

SET OFFSET nnnnn

Sets the scrolling offset of the anchor statement in the active window.

SET STYLESTR BOLD|ITALIC|UNDERLINE str1 str2

This command sets the escape sequences that delimit text styles in ASCII text. These strings are also changed by editing the strings in the EXPORT requester.

BOLD | ITALIC | UNDERLINE - selects which set of strings is to be modified.

"str1" becomes the sequence that starts the style.

"str2" becomes the sequence that ends the style.

Both strings must be present and neither string may contain a blank.

UNLOCK - Release previous lock

When directed at the port returned with a **LOCK** command this command releases the lock and makes the port invalid.

WINDOW CLIP n

Set the clipping level of the current window.

WINDOW CLOSE id

Close the window specified by the "id".

WINDOW FONT GET

Returns the font name and size (as in Times.15) the is used for the currently active window.

WINDOW FONT SET Font.size

Sets the font name and size (as in Times.15) to be used to display the text in the currently active window.

WINDOW GO id

Make the specified window the current window.

WINDOW ID

Return the ID of the current window.

WINDOW LINES n

Set the number of lines displayed for each statement in the current window.

WINDOW OPEN x,y,w,h

Open a new window described by the parameters Xpos,Ypos,Width,Height. The new window becomes the current ARExx window. There is no open file. A Jump command must be issued to display a file. The mouse and keyboard may be used in this new window. If the parameters are out of bounds, Thinker will open the best window it can.

Returns the window ID of the new window.

WINDOW SPACING n

Set the spacing of the current window.

A new option has been added to the SORT command.

**SORT FILE|BRANCH|PLEX ASCENDING|DESCENDING
LABELS|FIRSTC|CONTENTST|CONTENTBR|DATES
LENGTH nn KEYSTR xxxxxx**

When DATES is present neither LENGTH nor KEYSTR has any effect.

New Error messages:

114 - No TEXT on ADD ABOVE

182 - No current statement for GET DATE

183 - No active REXX file for GET FILENAME

184 - GET TITLE - No file displayed in active window

420 - Unknown WINDOW command

421 - No window ID specified, or invalid

423 - No window ID specified, or invalid

424 - No window parameters specified

425 - Too many windows

426 - No clip value specified, or invalid

427 - No spacing value specified, or invalid

428 - No lines value specified, or invalid

429 - No valid command after "SEE-THRU"

430 - Unknown CLIPBOARD command

501 - GET FKEY - no number present or out of range

502 - SET FKEY - no number present or out of range

503 - SET FKEY - no string present (use ") for null.

505 - GET SELECTED - no file open in window

506 - GET SELECTED - no text selected

507 - GET SELECTED - unable to read statement with selected text.

508 - GET BLOCKNUMBER - no current statement.

530 - SET JUMPTARGET - No ID

531 - SET JUMPTARGET - ID out of range

532 - SET JUMPTARGET - Window ID not valid

533 - SET DEFAULTFILE - No Jump Target Window

535 - GET ANCHOR - No active display window or no file displayed in active display window

536 - GET OFFSET - No active display window or no file displayed in active display window

537 - SET OFFSET - No active display window or no file displayed in active display window

538 - SET OFFSET - Bad offset or offset larger than anchor statement length

540 - CLEAR - No selection

541 - CLEAR - Selection not valid

550 - GET DEFAULTFILE - No default link file

551 - GET JUMPTARGET = No jump target window

600 - Can't show picture

602 - Can't issue CLI command

603 - Can't Launch application

604 - Can't Send ARexx command

605 - Can't play sound

606 - COMPACT, no current file

607 - COMPACT, can't compact with UPD

608 - COMPACT, failed

610 - GET FONT, No current statement

611 - GET FONT (WINDOW FONT GET), Can't establish font name

612 - SET FONT, No font name given

613 - SET FONT, No current statement

614 - SET FONT (WINDOW FONT SET), Cannot open font

615 - WINDOW FONT, No active display window

616 - WINDOW FONT, No GET/SET operand

618 - WINDOW FONT SET, No font name given

620 - MAXTEXT No file open

621 - MAXTEXT No parameter

622 - MAXTEXT Parameter not numeric

623 - MAXTEXT Value out of range $1000 < x < 65000$

630 - IMPORT No current position

631 - IMPORT No Level Specifier

632 - IMPORT No lfs Specifier

633 - IMPORT No filename

634 - IMPORT Failed, probably file not found

640 - GET/SET STYLESTR No string selection

641 - GET/SET STYLESTR Selection not BOLD or ITALIC or UNDERLINE

642 - SET STYLESTR No start sequence string

643 - SET STYLESTR Start string > 19 characters

644 - SET STYLESTR No end sequence string

645 - SET STYLESTR End string > 19 characters

996 - LOCK request and unable to create new Port

997 - LOCK request and no result string requested

998 - LOCK, LOCK addressed to LockPort OR

UNLOCK addressed to Unlocked Thinker

999 - (ALL) Thinker is LOCKed

Three new sample AREXX macros

PUTDOWN

This macro is suitable for a Function Key as it moves the statement with the cursor to be down from the statement that precedes it. This is equivalent to a Move (down) operation.

PUTABOVE

This macro is suitable for a Function Key as it moves the statement with the cursor to be above the statement that follows it.

These ARexx macros are not complete in that PUTABOVE and PUTDOWN are not exact duals of each other (the operations do not commute). PUTABOVE reverses the effect of PUTDOWN but PUTDOWN does not reverse the effect of PUTABOVE. Beware of trying to undo a PUTABOVE with a PUTDOWN

ADDLABEL

This macro adds any selected text to the label string (the text between "()" characters at the beginning of the statement) associated with the statement containing the selected text. If there is no label string then one is created.

If See-Through is enabled the label is added to the base text. That is the label is added to the statement that is visible with "Enable See-Thru" disabled.

DIR

When used as a macro from **Thinker**, this program adds a branch for the named directory (you are prompted to enter a directory or path name) and builds a tree of branches naming all files and directories. The directory branches have labels with the full path name of the directory and the data in the statement is the short name. For files a two line statement is added with the first line being the short file name and the the seconds line is a full link to that file in a form that can be double clicked on to do a Jump Link to the file (display picture, play sound, launch application, etc).

New Tooltypes

AREXXLINKS

Yes, means that Links are to be processed externally by an ARexx script rather than being interpreted directly by **Thinker**. The ARexx script may send the link back to **Thinker** after any processing. See "use arexx for links" under the Behavior Menu.

AREXXPORT

Sets the name of the ARexx port which defaults to "Thinker". This allows more than 1 **Thinker** application to be controlled by ARexx at the same time.

COMPRESS

Save the Compress Statements behavior selection.

FIRSTCMD

The name of the ARexx macro that will be executed when **Thinker** is launched. This ToolType can be in the **Thinker** icon. If it is in the icon for a project then only if the project icon is used to launch **Thinker** will the FIRSTCMD ToolType be honored. Specified as "FIRSTCMD=filename.type". The value set using the Edit FKey menu item in the Edit menu.

FONTS

This Tooltype replaces the FONT tooltype. It is used to describe the fonts that are used in the document. This tooltype currently does not have any essential value.

FREEZE BOLD ITALIC UNDER

Saves the Read Only Styles selections

HELP

The name of the ARexx macro that will be executed when Help Key is pressed. Typing Shift-Help returns **Thinker** to where it was before the Help Key was typed.

HIDECR

Saves the Hide ~ selection.

LEVELNUMBERS

Set to Y if level numbers are to be printed and exported. Set to N if they are not included in the print or export. The default is N.

LINKEXEC

The name of the ARexx macro that will do external link processing. The default is "linkexec.thnkr". See the Behaviors Menu selection Use ARexx for Links.

LINKMACROS

Yes means that link macros are expanded.

MAXDUPS

This tooltype controls the maximum number of duplicate labels which can be reached in the "Multiple Statement with Same Label" Requester and by the ARexx sequence "Get Label First/Next" sequence. The default value is 64 and another value is selected with "MAXDUPS=nnn". This ToolType must be added manually using the INFO command or Information menu item on the Workbench.

MAXEXFILES

Sets the maximum number of external files that will be open at one time to resolve External Links. The higher this number is the more memory is consumed.

MAXEXLINKS

Sets the size of a table that remembers previously resolved external links. Like the Read Cache, this speeds up screen refreshes by avoiding going to the external file each time the screen is drawn. This number is relative to each external file that is opened. Setting this number large can speed screen refreshes during scrolling of documents that extract a lot of information using external links. However, large amounts of memory are consumed.

MAXTEXT

This Tool type sets the maximum length of a statement. It is overridden by any value set with the Edit Maxtext dialog. This ToolType must be added manually using the INFO command or Information menu item on the Workbench.

PAGELLEN

Sets the page length for Export. A value of 0 means that no pagination takes place on Export. Setting to any other value causes a Form Feed to be included in the exported file (in place of a Line Feed) after the number of lines specified in the ToolType have been exported. This value is set in the Export Requester.

PAGENUMBERS

This tooltype is set to 1 if page numbering is requesting for printing and exporting of files.

SCREEN

Case is not important in the specifications.

Examples

SCREEN = System-1.3-screen:640,400:LACE:2:038,fff,000,f70

An interlaced screen like the 1.3 Workbench screen.

SCREEN=System-2.0-screen:724,482:LACE:3:AAA,000,FFF,68B,B9E,B26,FFC,5BF

An 8 color Workbench 2.0 screen with colors suitable for display of the MIRAGE picture file.

SCREEN=System-1.3-screen:640,200::2:038,fff,000,f70

A non-interlaced 4 color screen like Workbench 1.3.

Format

SCREEN=Title:Width,Height:LACE:Planes:pen,pen,pen,pen

Title is any string without ":" characters.

Width,Height are numbers describing the desired size of the screen.

LACE indicates that an interlace screen is to be used. Omitting the word LACE requires that "::" appear instead.

Planes is a number from 1 to 4 describing how many bit planes are used in the display. The number of colors corresponding is 2 to 16.

Pen,pen.. are numbers describing the colors used for each of the pens in the screen. A 3 plane selection requires 8 pen numbers. Any unspecified pen numbers will use the System default color table. Pen numbers are Hexidecimal 3 digit numbers giving the Red,Green,Blue values for the color registers for the pen. "F00" is a pure red color.

Thinker will run on a custom screen and will run on Public Screens in some future release. The current support is for HIRES custom screens and the presence of the ToolType "SCREEN=" signals this behavior and describes the screen.

This ToolType should only be present in the "Thinker Icon" and not any of the project icons.

SHOWFMT

This tooltype is set to 1 if the Show Format option is selected for a the window that did the Save Options. See the Show format selection of the Options Menu.

SPLITJOIN

Saves the Return Equals Split option selection.

UNBOLD

UNITALIC

UNUNDER

Saves the strings used to turn of the corresponding style when exporting to an ASCII file. These strings should be set to the values expected by your word processor.

UPDATES

Saves the Use Update File Behavior setting.

UPDDIR

Names the directory where Update files are kept. See the section on Read Only Files.

TinyDraw

PAL and Large Workbench Screens are now correctly handled.

Bugs in OPEN have been repaired.

Code has been added to circumvent an alleged bug in ghosting of the SAVE menu item.

Code has been added to circumvent a bug in the AreaDraw routines in the graphics library.

Hangups using the ARexx links have been found and repaired.

Circles will show as circles on Interlaced screens. NOTE that they may no longer "fit" properly in the drawing if the drawing was made on a non-interlaced screen.

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